

T H O U G H T S

O N

B R I G H T E L M S T O N .

C O N C E R N I N G

S E A - B A T H I N G ,

A N D

D R I N K I N G S E A - W A T E R .

W I T H S O M E

D I R E C T I O N S F O R T H E I R U S E .

I N A L E T T E R T O A F R I E N D .

B Y J O H N A W S I T E R , M . D .

L O N D O N :

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THOUGHTS ON BRIGHTELMSTON.

Tandem ad illud remedium perventum fuerit, cui quasi genuinè morbus cedit. SYD. L. *proc. int.*

SIR,

IT may be thought that the utility of Bathing in the Sea, and Drinking Sea-Water has been so fully discussed, by several ingenious gentlemen, and particularly Dr. Russel, whose name deserves to be remembered for the lights he has thrown on this subject, nothing new or interesting can be offered on it: But, Sir, I had not been at Brightelmston above three days, before several particulars presented themselves, which makes a further discussion on Bathing in and Drinking Sea-Water necessary.

When I consider the elegant and polite taste of the readers into whose hands this may fall, it becomes an arduous undertaking; I shall therefore communicate my sentiments free-

ly, but in a concise and plain manner, that I may not intrude on their time too much.

O N B A T H I N G.

Bathing in the sea for pleasure, arises from two motives, the love of cleanliness, and the refreshment that cold bathing affords the body, by bracing and cooling it. To this a bold sandy shore contributes, where the water is clear, and free from the mixture of muddy fresh waters, which always deposite a quantity of filth; where the descent of the shore is gradual, not rocky; and where the tides do not suddenly rise, to make bathing dangerous: Such a shore for sea-bathing is to be preferred, and the perfection of such a shore Brightelmston can boast. But with all these advantages, there are inconveniencies which attend sea-bathing here; yet none but what may be easily remedied, by a proper attention of the inhabitants.

The coast of Brightelmston being open to the main sea, there is no shelter to the Bathers from the wind, which sets in to this shore almost constantly; and, if the weather is not very serene, the great agitation of the water occasioned thereby, makes the bathing oftentimes disagreeable, not to say dangerous, more especially to the ladies. This inconvenience may be remedied by a different position of the bathing machines while in use.

I would recommend that one half the number of machines, at least, be provided with skreens, to extend projectingly from the top of the door to the water, somewhat after the manner of those at Margate; these would keep off the wind, and make the machines more private. To this may be objected, the force of the waves, and strength of the wind, which might
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overfet the machines fo provided ; but this inconvenience is eafily remedied.

When the fea is much troubled, the machines fhould be turned, and pushed backwards a fufficient depth into the fea, that the perfon bathing may go into the water with his face to the fhore, and from this pofition of the machine will arife two advantages : The waves will be prevented from breaking againft the door of the machine, and wetting the party while *undreffing* or *dreffing*, and the machine by being placed between the perfon bathing and the fea, will break off the force of the waves, and be a fhelter from the wind ; and when feveral are placed near to each other, after this manner, the fhelter of them will be very confiderable, and confequently the bathing rendered much more comfortable. I think the fhore on the Eaft of the town is allotted to the ufe of the ladies, without any mixture of gentlemen, and I think a further rule fhould take place : That no man fervant or inhabitant, be permitted to bathe on that fide of the town during the feafon.

It has been a notion generally received, though very erroneoufly, that bathing is moft wholefome in cold weather, the blood and humours not being fo liable to agitations as in Summer heats : The utmoft force of which mode of reasoning centres thus ; by bathing in cold weather only, the perfon who bathes has it not fo much in his power to hurt himfelf by imprudence.

The pores of the fkin are more clofed, and perfpiration carried on more fparingly in cold weather, and when very cold the pores will be braced fometimesto a degree of rigidity, whereby the humours neceffary to be breathed off, by the fkin, are interrupted, and often occafion fixed pains in the limbs ; in thefe cafes cold bathing will not open the pores properly,, and we muft have recourfe to the temperate bath and friction. The

Germans, in such cases, relieve themselves by warm medicated baths ; and though it is a custom among the Russians to use cold bathing, to inure them to the extremes of their climate, we are informed that they go into the warm bath first ; and, at any rate, water in a fluid state in their country, during the colder months, must be warmer than their atmosphere.

We find that bathing was never much practised in Northern countries ; but if we turn our eyes to the Eastern and warmer climes, we can trace it back a great way into antiquity. Bathing was a custom prevalent with the Ægyptians, or Pharaoh's daughter would not have found Moses among the bulrushes ; probably it was a part of their law, a religious institution to prevent the ravages of the Plague, which so continually swept off numbers of their people. From these motives also bathing became a part of the Jewish religion, the Mosaic law being partly founded on those of the Ægyptians ; it is thus used among the Turks and Mahometans, and of the pleasure-baths of these people, Lady Mary Wortley Montague has lately given us some account.

The propriety of bathing in hot countries is obvious, for when the pores of the body are relaxed, the spirits wasted, and the skin also fouled by great discharges of sweat, arising from intense heat, what can so soon cleanse the skin, recruit the spirits, and restore the body, under these circumstances, as bathing.

It is to be observed, that bathing, as originally used, was in natural baths, and mostly in rivers, which by the agitation of their waters, and their surfaces being constantly exposed to the sun, were in a state of warmth, though much colder than the atmosphere, and very different from the cold of artificial baths, the waters of which are in a state of rest, and shielded from the sun, on which account these require greater caution when brought into use.

Bathing being much used in the East, it is but natural to suppose the inhabitants of towns which bordered on the sea, from a scarcity of fresh water, were put oftentimes to the necessity of bathing in sea-water ; learning hence that seawater did not harm them, but contrarywise was serviceable in many respects, it became a physical concern; in early ages the priests were the physicians, through whom probably Hippocrates was enabled to write a whole book on water.

The Greeks, copying the Eastern people, made great use of baths, and the Romans after them, who used them to such excess that they became a species of luxury ; every street of Rome had baths, the emperors erected stately edifices, with baths for public use, and there was not a Roman of note who had not, within his house, a sweating room, a hot, a temperate, and a cold bath. Pliny, in a letter to Gallus, describing his villa, gives some idea of these by an account of his own ; and the degree of elegance to which they carried these articles of luxury was amazing.* The use the Romans made of their baths was to fly to them as a material remedy in disease ; in these cases they used the temperate bath, hot bath, and sometimes the sweating room, to open the obstructed pores, and breathe off the offending humours by sweat ; and the people of our own country, as their pores are so frequently liable to be shut up, by sudden changes of weather, might derive advantages, in point of health, by more frequently bathing, than is at present customary among us.

When I was at Bath, the Duke of Kingston was erecting a most elegant set of baths and sweating rooms (for which spirited action he deserves the thanks of the public) when the

* Montfaucon vol. III. p. 2. of his History of Antiquities, gives a particular account of these baths.

workmen found, by digging, the remains of a Roman stove, which proves that these people, while in possession of our country, had a set of baths in that place, and those of great extent, their flues having been traced to different sides of the abbey church-yard ; the many remains of Roman antiquities discovered at Bath by Dr. Guidot who analysed and wrote on the waters, and others since him, I think sufficiently prove these flues to be Roman.

Having recourse to their baths when diseased, were not the only advantages the Romans derived from them : They used them daily for pleasure, and prevention of disease, they bathed constantly before dinner, after hunting or other athletic exercise ; and though their country was in a warmer latitude than ours, no harm arose to them from this practice, but in these cases, when the blood and humours were in agitation, they used the precaution to go first into the warm or temperate bath, to prepare them for the cold ; Thus, from fatigue, their bodies were refreshed ; they were clean and cool, and remained in that state till dinner time, after which they frequently indulged themselves with sleep.

I have brought this Roman mode of bathing into a point of view, that we may learn from them, to what extent we may use baths without injury. We find that no inconveniencies arose from their methods, they bathed after exercise, and fatigue, to recruit their spirits and strength ; and considering the serenity of their skies, and warmth of their atmosphere, there was little danger likely to arise from bathing ; but in a climate so variable as ours, it requires a greater degree of caution, for in our greatest summer heats the pores of our bodies are often suddenly closed by a prevailing chilliness of the atmosphere.

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When we use the cold bath for pleasure, to prevent any injury from it, we should bathe when our stomachs are empty and our spirits calm ; to those who use exercise no preparatory physic is required, agreeably to Hippocrates's opinion, but the indolent and sedentary should previously empty themselves by art, that no future injuries may arise from a Plethora.

Though it is not prudent in our climate to use cold bathing, after the body has been heated by exercise, as practiced in hotter climates, we should use exercise after bathing, and those who cannot, should have their limbs well rubbed, and their bodies warmly, but not hotly cloathed, to renew a proper degree of perspiration.

Swimming is a noble exercise of the limbs, and cold bathing, simply considered, braces the body and adapts it for exercise, provided we do not use bathing to excess. The sea, from the clearness and temperature of the water, (being warmer than river or spring water) is a desirable bath, and with these advantages, by the action of the salts contained in it, we are not so liable to cold afterwards ; and from the stimulus of the salts, the skin is excited to a discharge of whatever matter secretly obstructs the pores ; thus pimples appear, oftentimes, on the skin after sea bathing, which are easily remedied by a continuation of that bathing. The only inconvenience attending sea-bathing, as a pleasure bath, proceeds from a glutinous adhesive property in the water, arising from the salts and bitumen contained in it, that leaves a clamminess on the skin, which river and spring water do not.

Bathing in the sea for use, as an invalid, is very different, in some respects, from bathing in the sea for pleasure, and should not be entered upon but with caution ; we know by
experience,

experience, that sea-water used externally and internally, is an excellent remedy for many complaints, and so much so, as to succeed, with proper helps, when every other means used by the skilful physician has failed; but from a remissness in the application, or by too great hurry or imprudence in the use of this remedy, oftentimes the patient is disappointed in his hopes of a speedy cure, and what Dr. Russel, on this topic, has complained of very justly. “I am sensible, says he, many of my patients, from the inconvenience of being long absent from business, or pursuit of their pleasures, will be apt to hurry into a course of bathing before the body is altered, and sufficiently prepared by drinking sea water, or by a previous course of other remedies; which hurry is always detrimental to the patient, by protracting his cure.”

Sea-water is a noble remedy for all diseases of the skin, old ulcers, and diseases of the glands, even hereditary complaints have yielded to it. Though Dr. Russel is willing to suppose that no diseases are hereditary, but in this particular I must differ from him, and that in glandular complaints, which he particularly writes upon. For instance, when a childing woman is diseased with an old scorbutic, schrophulous, or leprous humour; during the time of uterine gestation, she is, to appearance, in a manner free from the complaint; but when not pregnant, her disorder returns to the same state as before; this is an observation I have made frequently, and particularly in leprous cases. Without entering into a nice discussion of the subject, it is obvious from hence, that the humours are attracted by, and become a portion of the circulating humours in the embryo; and when this happens, a prognostic may be made, that the disorder of the parent is incurable, however remediable it may be in her offspring, though,
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by proper care, the disorder may be checked which, without such helps, must become troublesome at a critical period of life, if not sooner.

But to the matter in hand ; the body of the person who bathes should be emptied previously, and if there are any external tumors or swellings or internal and containing matter, bathing is detrimental until the matter is discharged. Where the lips of a wound also are callous, or the induration of a tumor very great, *cold bathing* must be omitted till it begins to abate, which is known by the feel, when the extremities of it become soft, and the whole detached and loose ; then cold bathing is serviceable towards completing the cure. Dipping an invalid in the sea, and taking him out again instantaneously, makes sea-bathing of little more use than a bracer, and the effect scarce more than is common from every cold bath.

Bathing in the sea constantly has this effect ; every sore, imperfectly healed, it will open afresh ; and when this happens, Dr. Russel observes that the part affected being often bathed with sea water, and rubbed with a slimy sea plant called the *Quercus Marina* has a better effect than general bathing : The reason is obvious, the part being frequently wetted with the water, and salt slime of the plant, was kept moist ; by this means the active principle of the water (the salt) had time to insinuate itself ; for sea-salt has these particular properties, it not only corrects the corrosive and malign humours, that attend obstinate and old ulcers, but possesses at the same time, a drying quality which contributes to heal them. I can give a familiar instance of this, which, for the benefit of society, ought not to be concealed.

Sea-salt, properly applied, is a *present cure* for the *bite of a mad dog*.

Take sea-salt, or common kitchen-salt, dissolve it in fresh warm human urine, load the urine with as much salt as it can dissolve, with this liquor cleanse the wound and limb, of whatever Saliva may stick to it, fill the wound with salt, wet a double rag in the prepared liquor, and bind it on the part, as it dries, wet it with fresh liquor; in six hours open and wash the wound with the prepared liquor, fill it with fresh salt, apply the wetted rag, and proceed as before, in twelve hours the virus of the bite will be subdued: After this, keep the wound clean by washing it night and morning with a cloth dipt in the prepared salt liquor, 'till it is healed; let the party take as much sea-water, for three mornings successively, as will purge, and after each purging, at bedtime, an opiate of Mithridate dissolved in pennyroyal water. The use of the sea-water is to empty the body, and the use of the opiate to calm the spirits, which are generally, much agitated, and depressed on these occasions. Let the patient be kept quiet, let him not live low, but moderately indulge himself with wine. This regimen need only be pursued till the wound is healed, but if the wound is large, or when there are more than one, the party may take a draught of sea water daily, for a short time.

The ratio of the cure consists in the action of the salt upon the malign virus of the wound, before it can make any progress to infect the circulation. The salt, by being dissolved in urine, becomes more active, and is particularly assimilated to penetrate into any part of the body to which it is applied. The success of the application depends much, on the immediate time, the omission of it for twenty-four hours, might render this remedy precarious, and, perhaps, of no effect. As the poison at first is local, this application to the part affected, immediately destroys all danger. The purg-
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ing therefore, with sea water, the opiate at night, and the regimen prescribed, are only cautionary aids, co-operating with the topical application.

Observation 1st. If salt, dissolved in urine, can destroy the bite of a mad dog, may it not, applied in the same manner, destroy the virus of other animal poisons?

2dly, May it not, on the same principle, weaken or destroy the power of vegetable poisons, when local?

3dly, If it is found to destroy the force of animal and vegetable poisons, seperately, will it not act on those poisons when combined?—

Thus may it not abate the danger of a wound given by a poisoned weapon, as the composition with which these instruments are poisoned, is thought to be a mixture of the vegetable and animal. From Monkshood, and the poisonous fluids of animals, of the Serpent, &c.

Where the cure has been neglected, and there appear symptoms of the Hydrophobia I say nothing in preference of this remedy, before that of

Dr. Mead's, by Ground Liverword and Pepper;

Or the Tonquin receipt, by Cinnabar and Musk;

Or Dr. James's, by Mercury;

Or Dr. Nugent's, by Opium.

What we infer, by giving this cure a place here, is to illustrate the power of salt (the active principle of sea-water) in destroying the acrimony and poisonous quality of sores, and wounds, and as such disposing them to heal.

Hence, by a proper use of sea-water, obstinate breakings out, old and inveterate sores on any part of the body, diseases of the glands, the evil, and even cancers (if the parts are not too much injured) may be remedied, sea-bathing is serviceable also in rheumatisms, painful contractions of the limbs, palsies, and epilepsies.

Respecting cancers it may not be amiss to observe, that by keeping them constantly wet with cloths dipt in some of our English mineral waters, the malignity of them have been destroyed, and cures performed ; but I am inclined to think sea-water more effectual. However, we cannot speak too modestly on this head, as in confirmed cancers every kind of remedy hitherto known has failed.

Sea-water is serviceable, also, in some female complaints, and one in particular: In cases of barrenness, which are remediable, I look upon sea water to stand before all other remedies. There is a remarkable fecundity in sea-water, beyond even the much famed mud of the river Nile. The mucilaginous slime sea-water contains, the innumerable variety and numerous produce of the ocean, in vegetables, insects, and animals, the monstrous generation, and unweildy bulk of some of which, that abound in quantities of fat and oil, and astonish human reason, are convincing proofs of it : And we know sea-water to be a penetrating cleanser a bracer, and to act on the human body frequently by stimulus.

Before I quit the subject of cold bathing, it is necessary to observe, that the only time of bathing, at Brightelmstone, is early in the morning, but to bathe in the middle of the day, or in the evening, is equally beneficial ; nay, in some respects, is to be preferred to the morning, for when the cold winds of Autumn (or in fact, of any other time of the year) prevail. exposing the body to them, is dangerous, before the
genial

genial influence of the Sun has warmed them. And sea-bathing, as a remedy, will often fail, nay sometimes do harm, unless regulated by the physician, and proper medicines used at the same time, to the success of which, sea-water is a material agent in completing a cure, by co-operating with them, but cannot perform the great things some expect from it of itself.

We shall now treat a little on warm bathing.—Cold bathing, simply considered, is a bracer, but we recommend sea-bathing for something more, for the benefits derivable from the Salt and Bitumen contained in this water, which makes it a desirable agent in removing some particular obstinate disorders, most of which have been pointed out already. Where a disorder is very obstinate, and has been of long standing, bathing in the sea (cold bathing being a bracer) in the beginning of a cure is oftentimes improper, which Dr. Ruffel also observed, and he was obliged, in such cases to have recourse to the medicated warm bath.

As the active principle of sea-water is the salt contained in it, by the use of a temperate and hot bath of sea-water, many great advantages may be derived; instead of bracing and closing the pores of the skin, which is the consequence attending cold bathing, the hot bath would open them, and by the activity of the salt contained in the water, penetrate through every obstruction with which it comes into contact. If in this sense we derive benefit from cold bathing, how much greater must be the benefit received from hot bathing?

From the good effects of the hot bath used in Epileptic and maniacal cases (see Dr. Shaw's observations on hot bathing), it is natural to suppose that the madness and Hydrophobia caused by the bite of a mad dog, being neglected, is curable by a hot bath of salt-water.

Convulsions are produced by a stimulus on the nerves, which causes them to contract themselves. Opium may abate the convulsions and furor of canine madness for a time, by the stupor it produces on the nervous system ; as such it is a desirable medicine : But as salt is destructive of this poison, it being insinuated by the pores into the body, by means of heat and moisture, it will relax the habit, mix with the fluids, and probably will destroy the virus ; and as sweating is the consequence of hot bathing, so it may send off by the skin what is offensive to nature, and is the cure on which there is most dependence ; though I would not recommend the use of opium to be wholly laid aside, for reasons just given, but to use discretionally both remedies, as assistants to each other.

Dr. Russel rightly observes, that in scrophulous diseases the glands of the mesentery are always affected ; Dr. Andree, in his *Orthopœia* observes the same of the mesentery of rickety children, and Heister the same, but contradicts himself to oppose Cheselden. As the glands of the belly, in these cases, are primarily affected, nothing can remove these rugose and knotty swellings, and lay the proper foundation of a cure so readily, and effectually, as a temperate or hot sea bath, by which we make an application, immediately to the part, of a penetrating and resolving discutient. We find, even in hot countries, that they have their hot baths as well as cold, which they use to open the pores of the body when obstructed, and breathe off by them whatever is offensive to nature. Indeed the preference of the hot bath over the cold, in the cure of some diseases, is a subject that would admit of much discussion, and in defence of which, many authorities might be quoted, were it not so obvious that it needs none.

To make therefore bathing in sea-water more effectual, I would recommend the use of hot baths made of sea-water, to
different

different degrees of heat, as the nature of the disease may require. The provision of a bathing-tub, copper, and the inconvenience of carrying daily water to a house distant from the sea, in a sufficient quantity to make a bath, has so much trouble and expence attending it, that a patient will not have recourse to it, though necessary ; nor can the physician well recommend it under such disadvantages.

The town of Brightelmstone has been much favoured by the countenance of many noble and genteel families, who resort to it every season ; in return, every means should be, and I believe is put in practice to accommodate them, more especially those who are so unhappy as to be invalids.—For this purpose I wish to see a set of baths erected.

The building to contain these baths must be near the sea, on account of the water, I would recommend the bathing rooms to be finished in a plain but neat taste, and the baths themselves, respecting shape and size, to be nearly similar to those erected by the Duke of Kingston at Bath.

A building whose area is thirty feet, and twelve feet high, will admit of four rooms, with a bath in each, a lobby for servants to wait in, with a space behind them the whole length of the building, for the copper, the fuel, and cold bath, which must be kept supplied with fresh sea-water pumped out of the sea at half tide. One end of this room may be made also a sweating room, by a proper serpentine disposal of the copper flue ; there must be a communication, by pipes, from the copper to the baths, and a like communication from the reservoir, that the baths, by this means, may be attempered to any degree of heat required ; and here it is necessary to observe, unless ordered otherwise by the physician, that a hot bath should never exceed the natural heat of the body, and any medium between 50 and 80 degrees of Farenheit's thermometer will be
a good

a good standard ; for if at blood heat it may overcome and weaken the party too powerfully, but while in the bath the heat must be kept up by the addition of hot water.

There should be chairs provided also, as at Bath, to take the patient from, and back again to the bed side, for the advantage afterwards of sweating or taking rest, as the nature of the illness may require.

The utility of these baths is obvious; they may be used either for hot or cold bathing ; there are some invalids to whom cold bathing would be serviceable, could they be able to bear the fatigue of being dipt into the sea, and (what is more material) to be exposed to the cold air. If the weather happens to be stormy, and the sea so rough as not to admit of bathing in it, recourse may be had to the baths ; by this means bathing would become more universal, be unattended with terror, no cure protracted, and the stay of the company prolonged. Moreover Invalids would have the advantage of this bathing remedy all the year round, whereas, on account of the variableness of our climate, it is denied them at present, except in the Summer months, and then only in calm weather.

We come next to the Drinking of Sea-water.

To drink sea-water is certainly of great use in many cases, it cleanses the glands, and excites them to a discharge of whatever obstructs them, &c. but there are inconveniences that arise from the constant use of it, which ought to be provided against. There are many constitutions too delicate, and stomachs too weak to bear the nausea and sickness it produces, and even where this inconvenience is overcome by struggles, it makes the party very thirsty the remainder of the day. These are material objections to the constant use of it, and unless used constantly we cannot expect to derive much benefit from it.

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When it is taken two or three times, in quality of a purge, the sickness it produces is not detrimental, but on the contrary, often serviceable, and a good preparative to a course of bathing, where pleasure mostly is concerned ; but when it is meant to be continued, as an alterative diluent, it will not do. For example, in a glandular consumption, where constantly purging the body is not desired, and weakens the patient.

To remedy these inconveniencies, I would recommend the sea-water to be drank every morning in small quantities, not to exceed a quarter of a pint at one time, and that mixed with an equal quantity of new milk, by this means the sickness and thirst will be prevented, and thus united, become a noble medicine, they are correctors to each other, and neither the milk or sea-water, so combined, will disagree with the stomach, that could not bear either of them seperately.

When sea-water is required as a gentle purge, and the stomach not able to bear it, I recommend the following——

Take of sea-water and milk each four ounces ; put them over the fire ; and when they begin to boil, add a sufficiency of Cremor Tartar to turn into whey, strain it from the curd, and when cool drink it.

Sea-water thus managed is a great cleanser, a purifier of the blood, and a cooler ; whereas, sea-water taken alone is heating to many constitutions. Some may imagine, by the addition of Cremor Tartar to the sea-water, the efficacy of it, as a medicine, is abated, on the contrary, it has all the advantages sea-water can possess as an aperient or purge, without any of the disadvantages attending the use of it when alone ; except in some very particular cases.

Before I quit the subject, it is necessary to give one caution about drinking sea-water.

As the complaints for which it is constantly drank are generally very obstinate, some one mercurial preparation may be recommended to be taken at the same time ; but I would recommend to the patient carefully to avoid every preparation of mercury (unless particularly ordered by the physician) : For by the action of sea salt on mercury, it is converted into a violent poison, not unlike corrosive sublimate, and may prove very injurious to the constitution, more especially to the nervous system.

Having finished these cursory hints on bathing for pleasure, for use as an invalid, on the advantages derivable from hot salt baths, and made some observations on drinking sea-water, I shall conclude with wishing to see every plan which may contribute to the cure of obstinate diseases, carried into execution.

Brightelmston,

Sept. 8, 1768.

Yours, &c,

F I N I S.